CLAIMS

1. Process for manufacturing an anisotropic conducting film comprising a layer of electrically insulating material and conducting through inserts, the said process comprising the following steps:

a) formation on a substrate of at least one layer of material with through holes, the said layer being called the perforated layer,

b) filling of the through holes to form conducting inserts;

and being characterised in that it also comprises production of a mask partially covering a first end of the conducting inserts and etching of the unmasked part of the ends of the conducting inserts so as to obtain conducting inserts with pointed ends.

2. Manufacturing process according to claim 1, characterised in that the filling step b) is done by electrolysis, step a) comprises deposition of a conducting layer on the substrate before formation of the perforated layer, this layer being etched after the conducting inserts are made.

3. Manufacturing process according to either claim 1 or 2, characterised in that the perforated layer in step a) is done by depositing a layer of photosensitive resin, insolation of this resin through a mask and development of this resin to obtain the through holes.

4. Manufacturing process according to any one of claims 1 to 3, characterised in that the perforated layer in step a) is removed after the filling step b) and a step to deposit an insulating layer is performed on the substrate to form the insulating layer of the anisotropic conducting film.

5. Manufacturing process according to any one of claims 1 to 4, characterised in that a passivation layer covers the substrate in which at least one contact pad is housed.

6. Manufacturing process according to any one of claims 1 to 5, characterised in that production of the mask partially covering one end of the conducting inserts and etching of the unmasked part comprise the following steps:

- deposition of a photosensitive resin on the perforated layer in which the conducting inserts are formed,
- insolation and development of the photosensitive resin through the mask such that only a disk of resin remains at the top of a first end of each conducting insert,
- isotropic chemical etching of the first ends of the conducting inserts until the resin disks are removed such that a point appears at the end of each conducting insert.

7. Manufacturing process according to any one of claims 1 to 5, characterised in that production of the

mask partially covering one end of the conducting inserts and etching of the unmasked part comprise the following steps:

- coating of a buffer substrate (A) by a material (25) that can be transferred and that will protect the end of the conducting inserts,
- transfer of the said material (25) onto the conducting inserts such that only a disk of material remains at the top of the first end of each conducting insert,
- isotropic chemical etching of the first ends of the conducting inserts until the material disks are removed such that a point (27) appears on the first end of each conducting insert.

8. Manufacturing process according to the above claim, characterised in that the step in which the through holes (22) are filled is done such that the first end of each conducting insert is in the form of a nail head.

9. Manufacturing process according to any one of the above claims, characterised in that after the first pointed ends of the conducting inserts have been made, a protection layer is formed on the points of the conducting inserts.

10. Manufacturing process according to the above claim, characterised in that the protection layer is advantageously an anti-oxidising layer.

11. Manufacturing process according to the above claim, characterised in that the anti-oxidising layer is gold plating done by a technique chosen from among electroless plating, electrolysis or spraying of gold.

12. Manufacturing process according to claim 7, characterised in that the transfer of the transferable material (25) designed to protect the end of the conducting inserts is a polymer with better adhesive properties on the conducting inserts than on the buffer substrate (A) on which the material is located before the transfer.

13. Manufacturing process according to claim 7, characterised in that the transfer of the transferable material (25) designed to protect the end of the conducting inserts is a resin with better adhesive properties on the conducting inserts than on the buffer substrate (A) on which the material is located before the transfer

14. Manufacturing process according to claim 7, characterised in that the material (25) that can be transferred onto the end of the conducting inserts is transferred by applying pressure on the buffer substrate (A) on which the material is located before the transfer.

15. Manufacturing process according to claim 1, characterised in that the through holes (22) are filled using a technique chosen from among an auto catalytic

deposition, electrolytic growth, chemical or physical deposition and impregnation.

16. Manufacturing process according to any one of the above claims, characterised in that prior to manufacturing of the film, one or several layers are deposited on the substrate that make it possible to separate the film from the substrate after the film has been obtained, and to make the assembly mechanically stiff.

17. Process for manufacturing a semiconducting chip, characterised in that it includes a process for manufacturing an anisotropic conducting film according to any one of claims 1 to 16, the said film being placed on a semiconducting wafer, and a step to cut out the structure thus obtained.